Indoor Germination of Native Plant Seeds

Several years ago, I volunteered at Canada Blooms with the *North American Native Plants Society (NANPS).* Native plants species host and attract butterflies, bees and hummingbirds to your garden. Native plants are those plants that grew in a region prior to European settlement. Enthusiastic gardeners who purchased native plant seeds often did not know important germination information.

To increase the variety of native plants and biodiversity in your yard, plus save money, try these germination tips.

SEED GERMINATION REQUIREMENTS FOR INDOOR STARTING:

Indoor germination requires breaking the dormancy caused by the seed's natural physical and chemical barriers to germination. Some seeds have a hard or waxy coat (testa) as winter protection to keep water out. Nature overcomes these barriers by freezing and thawing, rubbing, and the seed passing through the digestive tracts of animals, etc.

To simulate nature and the light, temperature and moisture requirements of the seed, there are several methods for starting your seeds indoors.

- ***Stratification*** – simulate the temperature and moisture conditions required to break the seed's dormancy.
- ***Scarification*** – break physical seed dormancy by soaking, nicking, or scratching the seed coat

There is no one method of stratification or scarification method for all species. It is best to check the germination requirements for your species. Prairie Moon Nursery provides excellent information on the germination requirements for a wide variety of native species.

Here are some tips for germinating native plants indoors:

Cold Indoor Stratification:

Store dry seeds in a paper bag or jar. Label, date, place in refrigerator. Seeds may need to be refrigerated 1 - 4 months; or place in unheated, rodent-free location.

Wild Bergamot

Monarda fistulosa

Wild Bergamot *(Monarda fistulosa)* is also known as Bee Balm or Horse-mint. When started indoors, it requires cold stratification, but it can be directly sown in spring, on bare soil, and will germinate without overwintering. *Monarda fistulosa* has a lavender blossom and aromatic foliage. Indigenous peoples used its leaves for tea infusions. Wild Bergamot attracts butterflies, bees, and hummingbirds. It flowers from July through September.

Photo credit: Cathy Nikolaidis

Moist Stratification:

Place in a zip-lock bag. Label with the name and date. Add equal volume of clean sand or peat moss. Add water and then mix. The seeds should have a little excess water for the first 24 hours. After 24 hours, check the seeds are moist but not wet as they can drown in too much water. Squeeze out excess water. Store for the required time and temperature. Check periodically for dryness.

Cold Moist Stratification:

Follow the instructions for moist stratification, then store at refrigerator temperature. Duration of cold moist stratification can vary greatly by species from 10 to 129 days. Check species requirements as some species may require a combination of treatments to break dormancy.

Wild Columbine

Aquilegia canadensis

Columbine *(Aquilegia canadensis)* is also called Red or American Columbine. It is a great early blooming spring plant and provides early nectar for bees, butterflies, and hummingbirds. It requires 60 days or two months of cold moist stratification. Columbine is the larval host plant of the Columbine Duskywing. Its colourful flowers transition from red to yellow. Columbine is both sun and shade tolerant and can grow in many soil types, including pine tree areas.

Photo credit: https://bugwoodcloud.org/images

Scarification: Rub the seeds with medium grit sandpaper to abrade the seed coat. Scarification should be done before stratification if needed when starting indoors.

Photo credit: https://live.staticflickr.com

Wild Lupine

Lupinus perennis

Wild Lupine *(Lupinus perennis)* is a host plant for the Karner Blue butterfly. It requires scarification in order to germinate. It emerges in May and blooms through June and July. It also requires 10 days of cold moist stratification. When planted out, Lupine requires well-drained soils. It adapts to most dry soil types: sand, loam, and gravel.

Direct Light:

Some seeds are very small or need light to naturally break dormancy and germinate. Seeds requiring this treatment should be surface-sown. No soil cover, or just a dusting of soil, should be applied. Do not let the soil dry out until the seedlings are established.

Photo credit: Cathy Nikolaidis

Cardinal Flower

Lobelia cardinalis

Cardinal Flower *(Lobelia cardinalis)* is a nectar source for hummingbirds and swallowtail butterflies. This is a species that requires direct light with no soil cover as well as cold moist stratification for 60 days.

Cardinal flowers grow best in moist, rich soils in full sun to partial shade. Cardinal flower seeds need to make good seed to soil contact in order to germinate.

Blue Eyed Grass *(Sisyrinchium campestre)*

Photo credit: Cathy Nikolaidis

- Cold moist stratification for 60 days
- Seeds grow best in cool soil
- Best planted outside in the fall after hard frost

Joe Pye Weed *(Eutrochium maculatum)*

Photo credit: Cathy Nikolaidis

- Cold moist stratification for 30 days
- Needs direct light; surface sown

Final thoughts

Don't forget to save your seeds for the next season, try winter sowing and divide your larger perennials for more plants

Resources:

How to Germinate Native Seeds - Prairie Moon Nursery

Indoor Native Seed Stratification « NANPS

Johnson, Lorraine. 100 Easy-to-Grow Native Plants. Toronto: Whitecap Books, 2005.

Propagating Native Plants: Getting Your Seeds to Grow, Stefan Weber « NANPS

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